

Patent Claims

1. Valve arrangement with a housing, an inlet connection and an outlet connection, which are connected with each other via a flow path, in which is located a closing device, which has a valve seat and a valve element interacting with the valve seat, the valve element being loaded in the direction of the valve seat by a resetting device and being acted upon on the side facing the valve seat by a pressure in a first pressure chamber, said pressure corresponding to the pressure in the inlet connection, when the closing device is closed, and on the side facing away from the valve seat by the pressure in a second pressure chamber, which is connected with the outlet connection via a channel arrangement, in which is located at least one auxiliary valve, and with the first pressure chamber via a throttle, **characterised in** that the channel arrangement (14) ends in a suction nozzle arrangement (18), which is located in the flow path.
2. Valve arrangement according to claim 1, **characterised in** that the suction nozzle arrangement (18) has at least one suction nozzle (20, 21), which is directed towards the outlet connection (4) and has a bordering wall, whose outside is exposed to the fluid flowing in the flow path.
3. Valve arrangement according to claim 2, **characterised in** that the suction nozzle arrangement (18) blocks a fluid entry into the channel (14).

- 13 -

4. Valve arrangement according to one of the claims 1 to 3, characterised in that the suction nozzle arrangement (18) is connected with the housing (2) in at least two positions.

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5. Valve arrangement according to one of the claims 1 to 4, characterised in that the suction nozzle arrangement (18) has a body, which is located in extension of a pilot valve seat (17) of the auxiliary valve (15).

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6. Valve arrangement according to one of the claims 1 to 5, characterised in that the suction nozzle arrangement (18) has a pipe (19), which has a slot (20) in the direction of the outlet connection.

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7. Valve arrangement according to claim 6, characterised in that the pipe (19) is connected with the channel (14) on a frontside.

20 8. Valve arrangement according to one of the claims 1 to 7, characterised in that the pipe (19) is located in the area of a diameter of the outlet connection.

25 9. Valve arrangement according to one of the claims 1 to 5, characterised in that the suction nozzle arrangement (18) has an annular nozzle (21), whose opening is directed towards the outlet connection.

30 10. Valve arrangement according to one of the claims 1 to 9, characterised in that the suction nozzle arrangement (18) is located in a section (24) of the flow path with reduced cross-section.